

ABSTRACT

5 A hollow portion (7) of a spindle 5 through which a
draw bar (9) and a disc spring assembly (11) are inserted
has a closed chamber structure and constitutes an oil
pool chamber in which a lubricating oil is filled. The
bearing portions (21, 39) for supporting the draw bar (9)
in the oil pool on both sides thereof have the same inner
diameter so that the volume of the oil pool chamber does
10 not change when the draw bar (9) is moved forward and
backward. As a result, the lubricating oil is not pushed
out of the oil pool chamber. Thus, a spindle unit can be
provided in which a clamping means, consisting of the
draw bar (9) and the disc spring assembly (11), for
15 clamping a tool or a workpiece pallet at the forward end
of the spindle can be reliably lubricated, so that the
friction on and the breakage of the clamping means is
reduced and that the service life of the unit is
lengthened.